

REMARKS/ARGUMENTS

Claims 49-60 and 62-67 are pending. By this Amendment, claim 54 is amended, restricted claim 61 is cancelled, and claims 62-67 are added. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

At the outset, Applicant appreciates the courtesies extended by Examiners Landau and Wilson to Applicant's representatives during a personal interview conducted on October 14, 2003. The substance of the personal interview is discussed below and generally reflected in the Interview Summary prepared by Examiner Landau.

As compared to the claims that were presented during the personal interview, dependent claim 54 has been amended to recite that the distance between subsequently engraved pits is minimized (see page 10, last two lines of the present specification), which is one way the engraving path is optimized per claim 54.

Applicant acknowledges that claim 61 has been withdrawn from consideration as being directed to a non-elected invention. Although claim 61 is canceled, Applicant reserves the right to pursue protection for the subject matter of claim 61 in a divisional application.

Claims 49-60 were rejected under 35 U.S.C. § 103 over Miller et al. in view of Woelki et al. This rejection is respectfully traversed.

The Office Action acknowledges that Miller et al. fails to teach or suggest a beam focuser, or a beam deflector being arranged intermediate the beam generator and the beam focuser.

To make up for this deficiency, the Office Action relies on the teachings of Woelki et al., concluding that it would have been obvious to one of ordinary skill in the art to modify Miller et

al. by using the beam focuser of Woelki et al. The motivation for making this combination is for the purposes of focussing the beam to a smaller point on the surface of the target.

At the outset, Applicant respectfully submits that Woelki et al. is directed to non-analogous art. In particular, Woelki et al. 1) is not in the same field of endeavor and 2) does not address problems that were addressed by the inventor of the present application.

With regard to point 1), Woelki et al. is directed to use of a laser for writing on silicone wafers and is therefore not in the same field of endeavor – i.e., the tab laser art in which visible markings are provided to the tab portion used in a beverage can. It is not appropriate to define the field of endeavor to "lasers" generally, as the present claims are restricted to a laser unit providing markings on a continuous strip of metal (preamble of claims 49 and 60) in which a control unit of the laser unit is set to control the laser unit to provide laser engraved markings at exact locations when the strip is in an immobilized condition before being fed into a processing apparatus structured to mechanically shape the thus-marked strip into marked articles to be included in cans (claim 49), or in which a processor is programmed to control the laser unit to provide a large number of visible pits in the surface to produce the pattern within a dwell time when the strip intermittently is in an immobilized condition (claim 60). The field of endeavor should be limited to laser units for intermittently fed tab stock, per the language of claims 49 and 60.

Regarding point 2), Woelki et al. discloses extremely small dots on a silicone wafer to overcome the problems associated with larger spots that create dust and debris that are not desirable in a clean room environment. Thus, Woelki et al. is not directed to solving a problem which faced the present inventors – creating a laser unit that, in a relatively short dwell time, can

move rapidly and form visible, accurately placed markings on a very small area of an intermittently fed metal strip.

Even if the references are from analogous arts, which they are not, there is no motivation to combine them. For example, Woelki et al. recognizes that a single one of its smaller sized dots is not readable and therefore requires that a cluster of such dots be provided to make a visible, readable marking. Because a greater number of dots is required to make a visible, readable marking, the processing time between making such dot clusters is logically increased. This increase in processing time is not desirable in the environment of Miller et al. since Miller et al. deals with the provision of markings in the dwell time of a high-speed, intermittently operated machine. In particular, Miller et al. relates to providing a laser that can provide a visible marking in the dwell period of an intermittently fed strip of metal stock material.

Accordingly, it would not have been obvious to one of ordinary skill in the art to have used a lens as taught by Woelki et al. in the apparatus of Miller et al., thereby increasing the number of dots required to create a pattern. Such an increase in dots increases the processing time required, which is undesirable when the laser only has a short period of time (the dwell time) in which the dots must be created. For example, claim 60 recites that the dwell time is less than 60 ms. The specification of Woelki et al. is not concerned with cycle time. In fact, Applicant respectfully submits that the Woelki et al. laser system uses a standard laser writer with low beam output which is not useful for apparatus requiring high speed application.

During the interview, the Examiners took the position that one of ordinary skill would have combined the references, generally by taking the lens of Woelki et al. and applying it to Miller et al. However, the Examiners cannot take the lens element of Woelki et al. in isolation, to the exclusion of the other elements and teachings thereof. In this case, Woelki et al. teaches to

provide its lens and overall system to move away from a very large laser spot to a series of much smaller laser spots, e.g., 9 spots, none of which are clearly visible or readable unless provided in a cluster. See Col. 3, lines 24-27 of Woelki et al. It would not have been obvious to a skilled artisan in the tab laser art to have provided Miller et al. with such a lens because Miller et al. is concerned with decreasing the time necessary to apply a marking during the dwell period of an intermittently fed strip. The selection of Woelki et al.'s lens without considering its adverse impact on the system of Miller et al. is the result of impermissible picking and choosing of individual elements based on impermissible hindsight. It simply would not have been obvious, to one in the tab laser art, to have made the laser in Miller et al. focused on a smaller spot, per the Examiner's suggestion, as this will decrease the likelihood that the spot will be readable and increase the processing time required to create a readable spot. "It is impermissible within the framework of Section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of the other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." (Emphasis added.) In re Kamm, 172 USPQ 298,301 (CCPA 1972).

In addition, the Miller et al./Woelki et al. combination does not teach the subject matter of the dependent claims.

For example, claim 52 recites that the processor is programmed to control a time period between subsequent pulses such that each pulse has sufficient energy to generate one of the pits. In the Office Action, it is acknowledged that Miller et al. does not teach this subject matter. To make up for this deficiency, the Office Action relies on Woelki et al., citing column 3, lines 1-10, which only generally teaches that the controller coordinates the focus point and the timing of the pulse initiating signals to produce a pattern of spots. By contrast, claim 52 recites a controller to

control a time period between pulses. The timing between pulses in Woelki et al. is based on row scanning (each row is scanned three times), and the time between the pulses is arbitrary, i.e., controlled based on the spacing of the spot locations on the grid, not by the controller.

Furthermore, claim 54 sets forth that the processor is programmed to determine an optimum engraving path in which the pits should be produced in the surface to form the pattern. In the Office Action, it is stated that this feature does not structurely distinguish the laser unit of the claimed invention over the laser unit of Miller et al. However, as discussed during the interview, it is improper for the Examiner to ignore the feature that the processor is programmed to determine an optimum engraving path since it is a positively recited element of the claim. The claim defines what the processor is (i.e., programmed), not what it does. Even if the language is arguably functional, "...these potentially distinguishing features cannot simply be ignored." In re Echerd, 176 USPQ 321, 322 (CCPA 1973). Miller et al. does not teach or suggest the subject matter of claim 54. In addition, Woelki et al. describes a conventional dot matrix type operation in which a plurality of horizontal traverses are executed from the top row to the bottom row. There is no description of optimizing the path by which the series of dots are created in Woelki et al.

In addition, neither Miller et al. nor Woelki et al. teaches or discloses characters that are provided sequentially one after another on the surface, per claim 56.

In addition, new claims 62-67 are presented for the Examiner's consideration. For example, claim 62 recites that the beam focuser is a lens having a focal length between about 120-190 mm, whereas Woelki et al. describes its flat field lens 26 as having a focal length of 100 mm (see column 2, lines 10-14). During the interview, claims 62-64 were favorably received, as indicated on the Interview Summary.

JENDICK

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Finally, on page 6 of the Office Action, it appears that the rejection of claim 60 is based on a combination of Miller et al. and Ihara. During the interview, the Examiners agreed that the inclusion of Ihara was a mistake that would be rectified in the next Office Action.

Reconsideration and withdrawal of the rejection are respectfully requested.

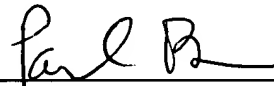
In view of the above amendments and remarks, Applicant respectfully submits that all the claims are allowable and that the entire application is in condition for allowance.

Should Examiner Landau believe that anything further is desirable to place the application in better condition for allowance, he is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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